

Annual Report on Affordability Findings for Compliance with the Missouri Clean Water Law
Calendar Year 2023
Prepared by Missouri Department of Natural Resources
Water Protection Program

The General Assembly enacted Section 644.145 of the Revised Statutes of Missouri (RSMo) in 2011, to ensure that the Department of Natural Resources considers affordability when incorporating new requirements for discharges into permits for publicly owned sewer systems or water or sewer treatment works, or when enforcing provisions of Chapter 644 RSMo or the Federal Water Pollution Control Act. This report presents the department's affordability findings made during calendar year 2023. Whenever the risk of an unaffordable action is high, the department works with permittees before issuing any final permit or final enforcement action to mitigate impacts where possible and avoid creating an unaffordable situation. These mitigation efforts can include temporary variances, revised compliance schedules, and the reevaluation of financing options.

The statutory definition of affordability with respect to payment of a utility bill is: "a measure of whether an individual customer or household with an income equal to or lower than the median household income for their community can pay the bill without undue hardship or unreasonable sacrifice in the essential lifestyle or spending patterns of the individual or household, taking into consideration the criteria described in subsection 4 of this section." Section 644.145.3(1) RSMo. See Appendix A for the subsection 4 criteria.

Number of Findings of Affordability

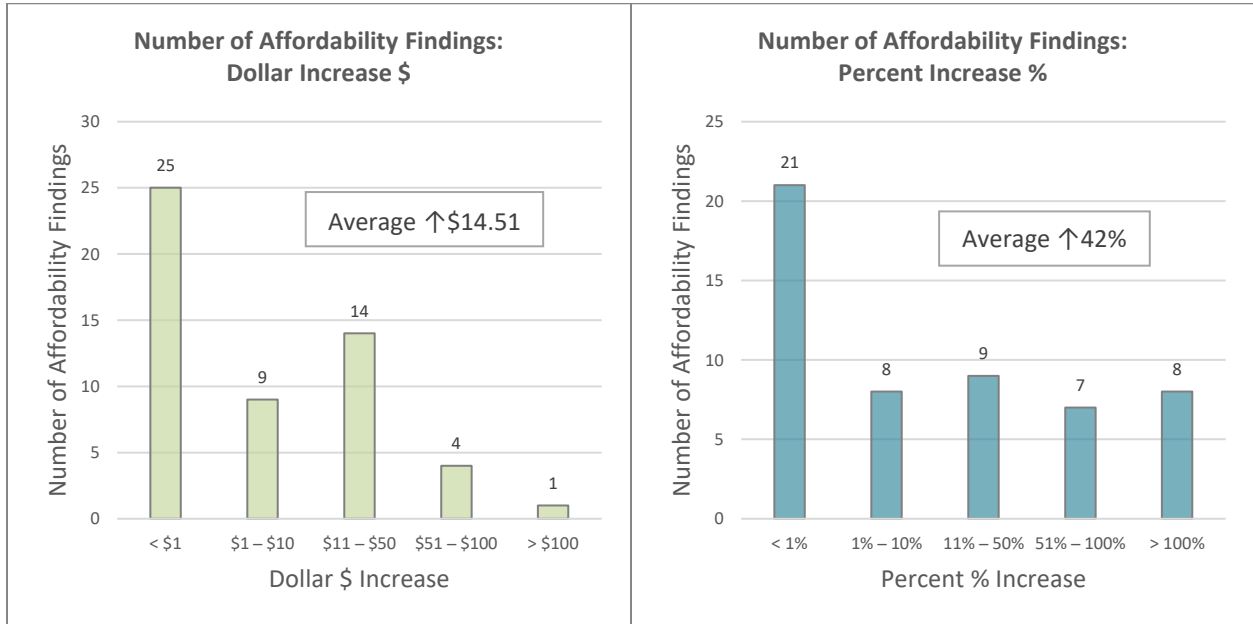
The department conducted 53 findings of affordability with effective dates in calendar year 2023. In all cases where affordability challenges exist, the department seeks ways to reduce economic impacts. The most common approach is allowing adequate time in implementation schedules to mitigate potential adverse financial impacts resulting from the costs of the improvements. The department also seeks opportunities for struggling systems to regionalize or consolidate with other utilities on a voluntary basis. Additionally, the department uses compliance assistance to work with communities to avoid enforcement actions that would impose penalties that could cause further affordability challenges. By utilizing these and other approaches, all 53 findings were categorized as affordable.

Findings Requiring Mitigation

The department utilizes a variety of metrics, data bases, and tools (see Appendix B) to determine if a permitting action may cause a financial burden to the community's users. Of the 53 permitting actions requiring affordability findings in 2023, 12 permitting actions may cause a high financial burden to the community's users and required significant mitigation to avoid an unaffordable situation. Additionally, 18 permitting actions may cause a low to medium financial burden, and 23 are expected to cause no financial burden. For 2023, all permitting actions requiring mitigation utilized a Schedule of Compliance (SOC), which allows adequate time in implementation schedules to mitigate potential adverse financial impacts resulting from the costs of the improvements. Each of these are highlighted in Table 1 (page 3) with the level of burden and duration of the SOC in years.

Average Increase in Sewer Rates in Dollars and Percentage

For the 53 findings, the projected increases in monthly sewer rates ranged from \$0 to \$118.94, with an average of a \$14.51 increase, and 25 of 53 findings being less than a \$1 increase. The projected percent increases in sewer rates ranged from 0% to 250%, with an average of a 42% increase, and 21 of 53 findings being less than a 1% increase.



Average Increase in Sewer Rates as Percentages of Median Household Income (MHI)

For the 53 findings, the projected increases in sewer rates as a percentage of the respective communities' MHI ranged from 0% MHI to 2.18% MHI, with an average of 0.34% MHI increase, and 29 of 53 findings being less than a 0.1% MHI increase. The communities included counties, cities, villages, towns, and census-designated places in which the service users were residing.

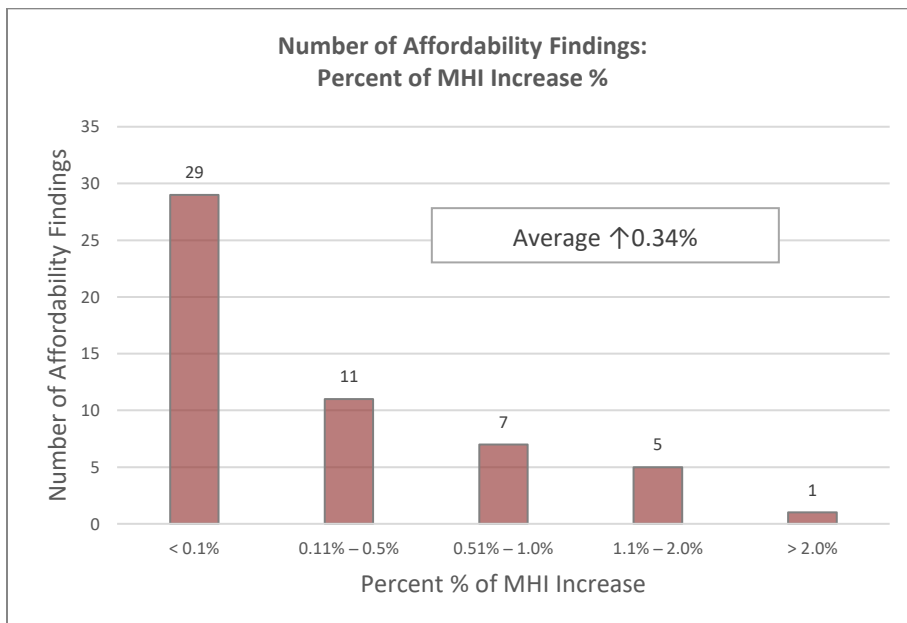


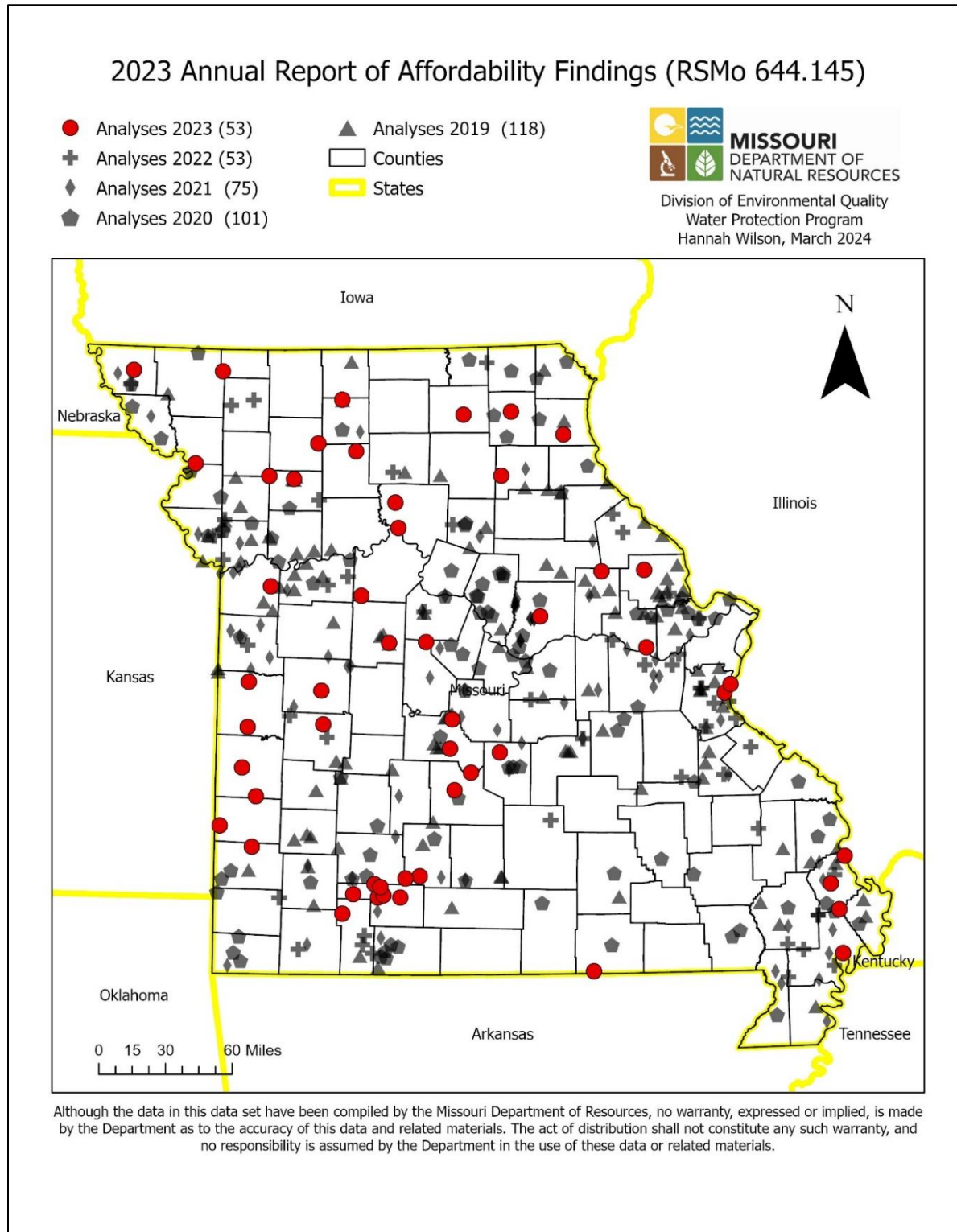
Table 1. List of permit holders receiving affordability findings in 2023

This table is arranged in descending order of the projected monthly sewer rate per user as a percentage of monthly MHI of the respective community, highlighted in green.

Permit No.	Facility Name ²	Facility Location (County)	Annual MHI ⁵	Number of Service Users	Current Monthly Sewer Rate Per User \$	Projected Monthly Sewer Rate Per User \$	Projected Monthly Sewer Rate Per User %MHI ^{1,5,6}	Increase of Monthly Sewer Rate Per User ⁷ \$	Increase of Monthly Sewer Rate Per User ⁸ %	Increase of Monthly Sewer Rate Per User ⁹ %MHI	Households at or Below Poverty %	Mitigation Level ¹⁰	Schedule of Compliance (years) ¹¹
MO-0022071	Hamilton SE, SW, & NE WWTF ³	Caldwell	\$38,629.00	713	\$35.97	\$106.10	3.30%	\$70.13	194.97%	2.18%	21.70%	high	20
MO-0124419	Stoutland WWTF	Camden	\$39,914.00	97	\$54.80	\$90.50	2.72%	\$35.70	65.15%	1.07%	26.10%	high	NA ¹²
MO-0041076	Clarence WWTF	Shelby	\$31,707.00	333	\$68.09	\$68.92	2.61%	\$0.83	1.22%	0.03%	27.70%	low	5
MO-0099171	Edina WWTP	Knox	\$29,296.00	565	\$63.50	\$63.65	2.61%	\$0.15	0.24%	0.01%	26.20%	none	
MO-0049506	Kirksville WWTP	Adair	\$37,930.00	6934	\$49.86	\$78.76	2.49%	\$28.90	57.96%	0.91%	28.80%	high	16
MO-0103331	Fulton WWTP	Callaway	\$49,581.00	4434	\$41.78	\$102.53	2.48%	\$60.75	145.40%	1.47%	15.60%	high	10
MO-0104027	Sparta WWTP	Christian	\$60,752.00	849	\$48.50	\$112.22	2.22%	\$63.72	131.38%	1.26%	10.70%	high	12
MO-0026671	Lowry City WWTF	St Clair	\$36,819.00	398	\$18.75	\$65.64	2.14%	\$46.89	250.08%	1.53%	16.40%	high	9
MO-0102679	Rogersville WWTP	Webster	\$53,746.00	1602	\$35.84	\$93.55	2.09%	\$57.71	161.02%	1.29%	15.90%	high	12
MO-0136051	Village of Country Club	Andrew	\$84,907.00	528	\$144.85	\$144.98	2.05%	\$0.13	0.09%	0.00%	7.90%	none	
MO-0108243	Silex WWTF	Lincoln	\$41,607.00	95	\$59.98	\$69.12	1.99%	\$9.14	15.24%	0.26%	5.70%	medium	8
MO-0092517	Rich Hill WWTF	Bates	\$38,393.00	574	\$57.50	\$60.25	1.88%	\$2.75	4.78%	0.09%	28.20%	medium	NA ¹²
MO-0032557	Brunswick WWTF	Chariton	\$36,525.00	341	\$57.00	\$57.24	1.88%	\$0.24	0.42%	0.01%	23.50%	none	
MO-0106151	Fremont Hills WWTP	Christian	\$121,310.00	551	\$48.77	\$167.71	1.66%	\$118.94	243.88%	1.18%	3.00%	medium	12
MO-0113026	Spickard WWTF	Grundy	\$29,652.00	100	\$40.96	\$39.84	1.61%	\$0.00	0.00%	0.00%	42.80%	high	9
MO-0040835	Crane WWTF	Stone	\$43,426.00	641	\$21.47	\$58.02	1.60%	\$36.55	170.24%	1.01%	19.70%	med-high	12
MO-0093813	Fordland WWTF	Webster	\$42,526.00	333	\$32.00	\$56.35	1.59%	\$24.35	76.09%	0.69%	17.50%	high	12
MO-0094943	Crocker WWTP	Pulaski	\$45,369.00	469	\$36.85	\$58.92	1.56%	\$22.07	59.89%	0.58%	27.70%	high	NA ¹²
MO-0092517	Rich Hill WWTF	Bates	\$44,580.00	583	\$57.50	\$57.62	1.55%	\$0.12	0.21%	0.00%	28.50%	none	
MO-0126195	Morley WWTF	Scott	\$35,663.00	338	\$45.00	\$45.07	1.52%	\$0.07	0.16%	0.00%	28.20%	none	
MO-0116581	Mindenmines WWTF	Barton	\$31,213.00	115	\$38.00	\$38.04	1.46%	\$0.04	0.11%	0.00%	57.90%	none	
MO-0055387	Middletown City WWTF	Montgomery	\$31,800.00	90	\$26.01	\$38.51	1.45%	\$12.50	48.06%	0.47%	33.60%	medium	8
MO-0125636	Parnell WWTF	Nodaway	\$41,225.00	84	\$42.00	\$49.36	1.44%	\$7.36	17.52%	0.21%	9.40%	medium	9
MO-0094714	Mendon WWTF	Chariton	\$46,505.00	115	\$24.50	\$55.62	1.44%	\$31.12	127.02%	0.80%	11.20%	medium	NA ¹²
MO-0087149	Jamesport WWTF	Davies	\$37,516.00	259	\$24.50	\$44.36	1.42%	\$19.86	81.06%	0.64%	14.70%	med-high	8
MO-014761	Ewing WWTF	Lewis	\$48,022.00	219	\$52.00	\$52.12	1.30%	\$0.12	0.23%	0.00%	6.90%	none	
MO-0023132	Thayer WWTF	Oregon	\$33,277.00	911	\$33.95	\$34.03	1.23%	\$0.08	0.24%	0.00%	36.90%	none	
MO-0054518	Sweet Springs WWTF	Saline	\$46,133.00	584	\$29.61	\$46.79	1.22%	\$17.18	58.02%	0.45%	11.60%	medium	3
MO-0101567	Sedalia SE, C & N WWTP ⁴	Pettis	\$48,047.00	10336	\$48.28	\$48.29	1.21%	\$0.01	0.02%	0.00%	18.00%	none	
MO-0089109	Nevada WWTF	Vernon	\$45,497.00	3591	\$40.58	\$43.36	1.14%	\$2.78	6.85%	0.07%	18.70%	medium	NA ¹²
MO-0102318	Clever WWTF	Christian	\$48,528.00	1140	\$26.80	\$46.21	1.14%	\$19.41	72.43%	0.48%	9.50%	medium	12
MO-0044202	Jasper WWTF	Jasper	\$49,405.00	384	\$45.00	\$45.11	1.10%	\$0.11	0.24%	0.00%	20.10%	none	
MO-0091146	Chula WWTF	Livingston	\$40,231.00	88	\$34.50	\$34.96	1.04%	\$0.46	1.33%	0.01%	28.20%	none	
MO-0133671	Elk Valley WWTF	Christian	\$67,144.00	7631	\$42.00	\$56.58	1.01%	\$14.58	34.71%	0.26%	12.30%	medium	12
MO-0099163	Ozark WWTF	Christian	\$67,144.00	7631	\$42.00	\$56.58	1.01%	\$14.58	34.71%	0.26%	12.30%	medium	12
MO-0089010	Lebanon WWTP	Laclede	\$44,157.00	6308	\$35.86	\$35.86	0.97%	\$0.00	0.00%	0.00%	21.00%	low	NA ¹²
MO-0120111	Syracuse WWTF	Morgan	\$26,436.00	88	\$19.49	\$21.45	0.97%	\$1.96	10.06%	0.09%	39.70%	none	
MO-0123722	Shawnee Bend WWTP	Camden	\$42,356.00	739	\$34.07	\$34.26	0.97%	\$0.19	0.56%	0.01%	7.30%	none	
MO-0028886	Sni-A-Bar WWTF	Jackson	\$84,799.00	16684	\$39.50	\$58.72	0.83%	\$19.22	48.66%	0.27%	5.60%	low	7
MO-0129607	Camdenton Business Park WWTF	Camden	\$39,779.00	3	\$20.50	\$27.28	0.82%	\$6.78	33.07%	0.20%	22.10%	none	
MO-0097390	Clinton WWTP	Henry	\$41,757.00	4424	\$28.36	\$28.45	0.82%	\$0.09	0.32%	0.00%	22.80%	none	
MO-0028037	Nixa WWTP	Christian	\$71,567.00	9429	\$33.95	\$43.74	0.73%	\$9.79	28.84%	0.16%	7.40%	low	12
MO-0131172	Tuscany Hills WWTF	Christian	\$71,567.00	9429	\$33.95	\$43.74	0.73%	\$9.79	28.84%	0.16%	7.40%	low	12
MO-0022845	New Madrid WWTF	New Madrid	\$43,362.00	1450	\$25.58	\$25.66	0.71%	\$0.08	0.31%	0.00%	21.00%	none	
MO-0112623	Adrian Wastewater Lagoon	Bates	\$43,232.00	706	\$23.50	\$23.62	0.66%	\$0.12	0.51%	0.00%	21.80%	medium	8
MO-0106461	RCPSD Kimmswick WWTP	Jefferson	\$68,857.00	12869	\$37.34	\$37.36	0.65%	\$0.02	0.05%	0.00%	8.40%	none	
MO-0103594	Scott City WWTF	Scott	\$54,789.00	1915	\$28.50	\$29.67	0.65%	\$1.17	4.11%	0.03%	20.40%	medium	NA ¹²
MO-0126969	Pevely, Hunters Glen Subd WWTF	Jefferson	\$69,263.00	148	\$37.27	\$37.41	0.65%	\$0.14	0.38%	0.00%	7.80%	none	
MO-0104299	Cameron WWTP	Dekalb	\$60,573.00	2830	\$31.08	\$31.18	0.62%	\$0.10	0.32%	0.00%	10.30%	none	
MO-0040177	Sheldon WWTF	Vernon	\$35,045.00	193	\$17.60	\$17.81	0.61%	\$0.21	1.19%	0.01%	14.00%	none	
MO-0051608	Tarkio WWTF	Atchison	\$53,071.00	681	\$26.00	\$26.06	0.59%	\$0.06	0.23%	0.00%	14.00%	none	
MO-0044113	Marthasville WWTF	Warren	\$101,063.00	508	\$23.00	\$23.08	0.27%	\$0.08	0.35%	0.00%	3.50%	none	
MO-0095133	Miner WWTF	Scott	\$46,023.00	438	\$9.50	\$9.66	0.25%	\$0.16	1.68%	0.00%	13.70%	none	
Average			\$49,466.32	2311	\$39.13	\$53.62	1.37%	\$14.51	41.90%	0.34%	18.70%		10.4
Notes ^{*1} This table is arranged in descending order of projected monthly sewer rate per user as a percentage of monthly MHI of the respective community. ^{*2} Abbreviations used in the facility names include the following: WWTF: Wastewater Treatment Facility WWTP: Wastewater Treatment Plant RCPSD: Rock Creek Public Sewer District ^{*3} Hamilton SE, SW, & NE WWTF - Three facilities under three different permits, but share the same affordability findings for the city of Hamilton. ^{*4} Sedalia SE, C & N WWTP - Three facilities under three different permits, but share the same affordability findings for the city of Sedalia. ^{*5} MHI: median household income ^{*6} Projected Monthly Sewer Rate / (Annual MHI/12) ^{*7} Projected Monthly Sewer Rate - Current Monthly Sewer Rate ^{*8} Increase in Monthly Sewer Rate / Current Monthly Sewer Rate ^{*9} Increase in Monthly Sewer Rate / (Annual MHI/12) ^{*10} Mitigation Level - Estimated burden on users (high, medium, low, or none) of the projected user rate based on the 8 criteria of the affordability finding. Used to estimate the number of years for the schedule of compliance, or other mitigation effort. ^{*11} Schedule of Compliance - the estimated time in years for a community to implement new permit requirements to mitigate potentially unaffordable projected user rates. ^{*12} Analyses included in Abatement Order on Consent documents which do not utilize the schedule of compliance from affordability findings.													

Map 1. Geographical Distribution of the Wastewater Treatment Facilities with Affordability Findings Issued in 2023

The locations of the wastewater treatment facilities for which the department conducted affordability findings during calendar year 2023 (points in red) and the previous 4 years of affordability findings (points in grey).



Regionalization and Consolidation: An Increasing Choice for Pollution Control

In the department's ongoing effort to help Missouri citizens thrive by balancing a healthy environment with a healthy economy, one of our primary goals is to promote more efficient, resilient, and sustainable wastewater infrastructure across the State. Small wastewater systems face significant challenges in providing service to their users at a reasonable cost while complying with federal and state regulations. To help mitigate these burdens, regionalization and consolidation are becoming favorable solutions.

Regionalization refers to sharing physical infrastructure in a defined geographic area, such as when a public or private entity provides wastewater service by physically connecting existing and future communities to a regional or central wastewater treatment facility. When multiple entities work together, each utility benefits from reduced capital and operational costs, and increased economies of scale.

Consolidation refers to the transfer of ownership and/or operational authority of an independent wastewater system to a larger system. The fundamental advantage of consolidating systems under a central provider is financial – there are simply more customers to share the burden of paying the utility bills. Another benefit is that small wastewater system owners can relinquish the burden of regulatory obligations.

Completed consolidation and regionalization projects in Missouri have already demonstrated the ability to improve services to residents, reduce costs to providers, and ultimately improve water quality in our rivers, streams, and lakes.

Conclusion

Based on the information and data collected, derived, and examined, all the new requirements for discharges incorporated into permits for publicly owned sewer systems or water or sewer treatment works, and all actions enforcing provisions of Chapter 644 RSMo or the Federal Water Pollution Control Act by the Missouri department of Natural Resources during calendar year 2023 met the affordability criteria.

This report was prepared by the Operating Permits Section of the Water Protection Program, Missouri department of Natural Resources.

Appendix A. Subsections 644.145.4 and 644.145.9 of the Revised Statutes of Missouri

Revised Statutes of Missouri Chapter 644 Water Pollution

644.145.4. The department of natural resources shall adopt procedures by which it will make affordability findings that evaluate the affordability of permit requirements and enforcement actions described in subsection 1 of this section, and may begin implementing such procedures prior to promulgating implementing regulations. The commission shall have the authority to promulgate rules to implement this section pursuant to chapters 536 and 644, and shall promulgate such rules as soon as practicable. Affordability findings shall be based upon reasonably verifiable data and shall include an assessment of affordability with respect to persons or entities affected. The department shall offer the permittee an opportunity to review a draft affordability finding, and the permittee may suggest changes and provide additional supporting information, subject to subsection 6 of this section. The finding shall be based upon the following criteria:

- (1) A community's financial capability and ability to raise or secure necessary funding;
- (2) Affordability of pollution control options for the individuals or households at or below the median household income level of the community;
- (3) An evaluation of the overall costs and environmental benefits of the control technologies;
- (4) Inclusion of ongoing costs of operating and maintaining the existing wastewater collection and treatment system, including payments on outstanding debts for wastewater collection and treatment systems when calculating projected rates;
- (5) An inclusion of ways to reduce economic impacts on distressed populations in the community, including but not limited to low- and fixed-income populations. This requirement includes but is not limited to:
 - (a) Allowing adequate time in implementation schedules to mitigate potential adverse impacts on distressed populations resulting from the costs of the improvements and taking into consideration local community economic considerations; and
 - (b) Allowing for reasonable accommodations for regulated entities when inflexible standards and fines would impose a disproportionate financial hardship in light of the environmental benefits to be gained;
- (6) An assessment of other community investments and operating costs relating to environmental improvements and public health protection;
- (7) An assessment of factors set forth in the United States Environmental Protection Agency's guidance, including but not limited to the "Combined Sewer Overflow Guidance for Financial Capability Assessment and Schedule Development" that may ease the cost burdens of implementing wet weather control plans, including but not limited to small system considerations, the attainability of water quality standards, and the development of wet weather standards; and

- (8) An assessment of any other relevant local community economic condition.

644.145.9. The department shall file an annual report by the beginning of the fiscal year with the governor, the speaker of the house of representatives, the president pro tempore of the senate, and the chairs of the committees in both houses having primary jurisdiction over natural resource issues showing at least the following information on the findings of affordability completed in the previous calendar year:

- (1) The total number of findings of affordability issued by the department, those categorized as affordable, those categorized as not meeting the definition of affordable, and those implemented as a federal mandate regardless of affordability;
- (2) The average increase in sewer rates both in dollars and percentage for all findings found to be affordable;
- (3) The average increase in sewer rates as a percentage of median house income in the communities for those findings determined to be affordable and a separate calculation of average increases in sewer rates for those found not to meet the definition of affordable;
- (4) A list of all the permit holders receiving findings, and for each permittee the following data taken from the finding of affordability shall be listed:
 - (a) Current and projected monthly residential sewer rates in dollars;
 - (b) Projected monthly residential sewer rates as a percentage of median household income;
 - (c) Percentage of households at or below the state poverty rate.

Appendix B. Overall Procedure for Making Affordability Findings

The department conducts an affordability finding, or a Cost Analysis for Compliance (CAFCOM), as part of the renewal process for a National Pollutant Discharge and Elimination System (NPDES) permit, utilizing the following four primary tools and data sources:

- (1) A Financial Questionnaire with a Community Supplemental Survey sent to permit holders categorized as a Publicly Owned Treatment Works (POTW) for collecting information on the sustainability and financial capability of the community; examples of information requested are the “current monthly residential sewer rates,” and a primary socioeconomic indicator (Table 1), and “property tax collection rate in the municipality,” a secondary socioeconomic indicator;
- (2) The Affordability Prescreening Tool developed by the department for compiling and analyzing socioeconomic data available from national, regional and local databases, including statistics from the U.S. Census Bureau; an example of data being “monthly median household income” (Table 1) and “percentage of households at or below poverty” (Table 1);

- (3) A CAPDEWORKS Model developed by Hydromantis Environmental Software Solutions, Inc. for estimating the capital costs and operating and maintenance costs for different wastewater treatment technologies for compliance of upgrades so as to calculate the “projected monthly residential sewer rate” (Table 1);
- (4) The Missouri Rural Population Sustainability Assessment Tool developed by the Environmental Finance Center at Wichita State University for assessing the potential of growth and sustainability of each rural community.

Once the draft NPDES permit is completed, the permit holder is given the opportunity to review and comment on the draft permit and the CAFCom during the 10-day preview and 30-day public notice period. These review and comment periods offer permit holders an opportunity to provide additional information in regard to their community’s unique financial situations before the final NPDES permit is issued. When the NPDES permit contains a Schedule of Compliance, during the 10-day preview, department staff contact the permit holder via phone calls to ensure the permit holder has received and understood the draft permit and the CAFCom.